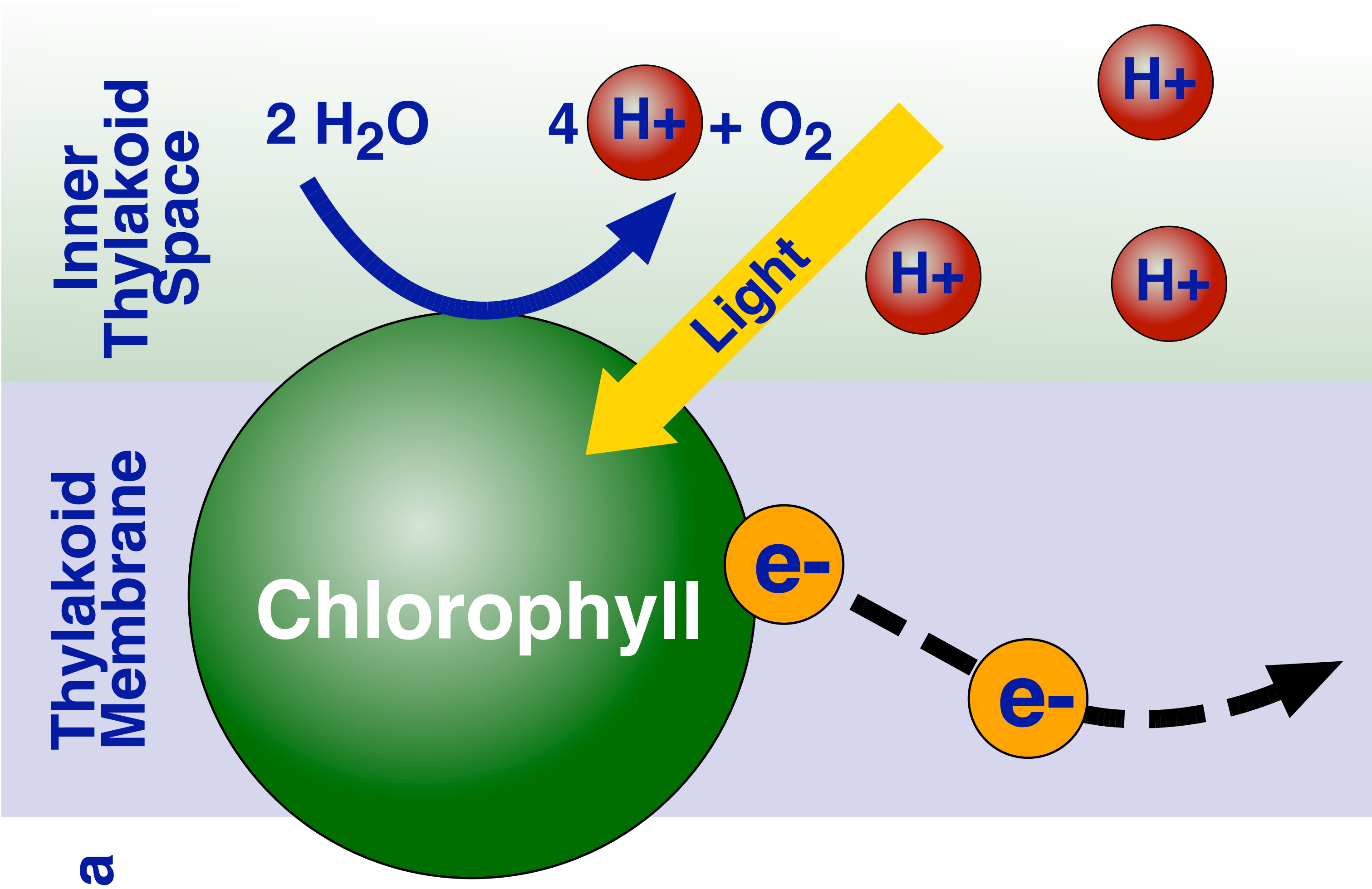
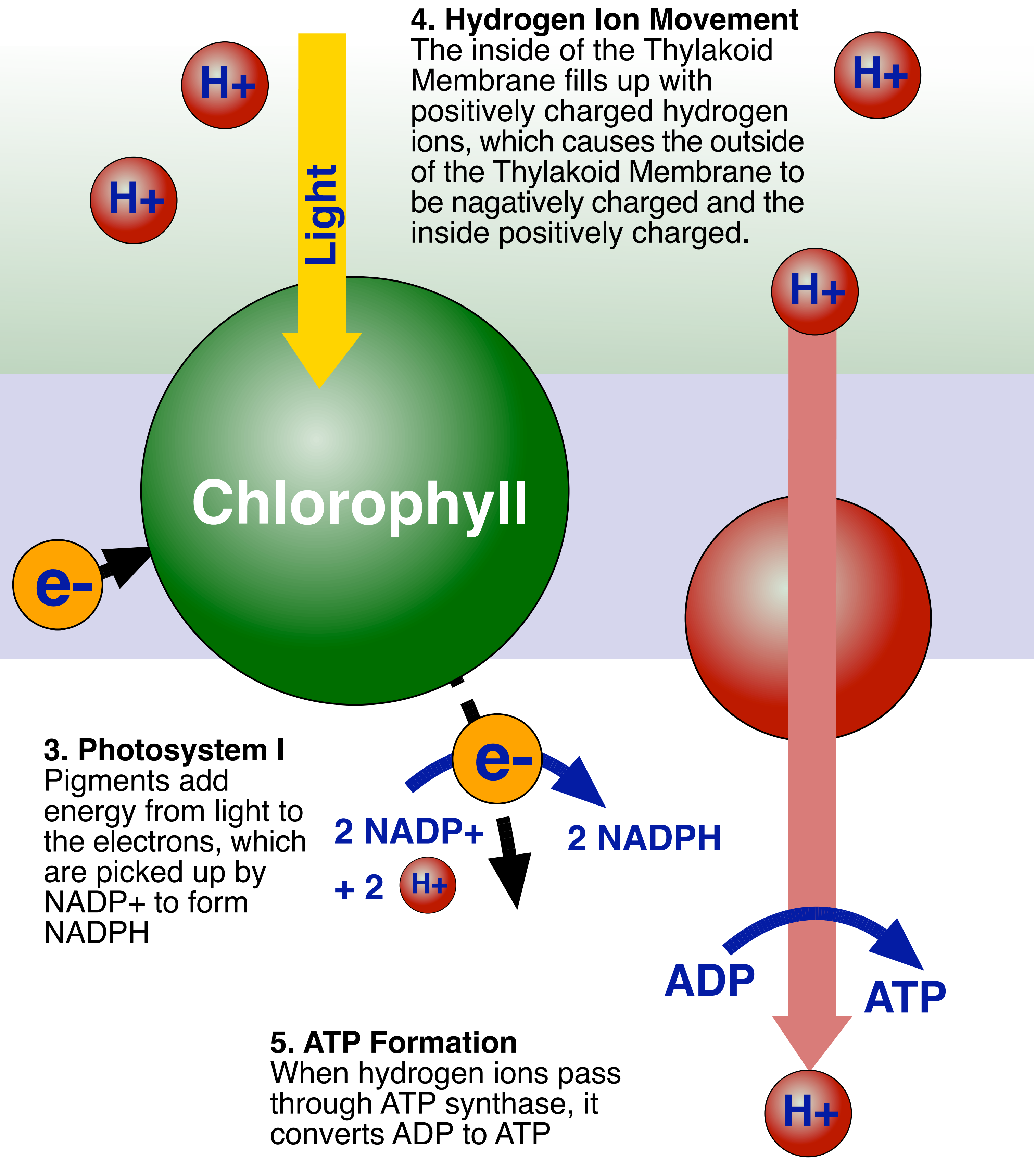
Light-Dependent Reactions

By Darrell Foote



1. Photosystem II
Energry from light absorbed by chlorophyll in Photosystem II is transferred to electrons (e-), which are then passed through the electron transport chain to Photosystem I. Enzymes separate water molecules into electrons, hydrogen ions (H+) and oxygen.

2. Electron Transport Chain
Molucules in the electron chain use energy from the electrons to transport hydrogen ions from the stroma into the inner thylakoid.



4. Hydrogen Ion Movement
The inside of the Thylakoid Membrane fills up with positively charged hydrogen ions, which causes the outside of the Thylakoid Membrane to be nagatively charged and the inside positively charged.

3. Photosystem I
Pigments add energy from light to the electrons, which are picked up by NADP+ to form NADPH

5. ATP Formation
When hydrogen ions pass through ATP synthase, it converts ADP to ATP